ABSTRACT OF THE DISCLOSURE

A nonaqueous electrolyte secondary battery includes a positive electrode having a positive electrode active material, a negative electrode containing a negative electrode active material capable of being doped/undoped with lithium, and a nonaqueous electrolyte. The nonaqueous electrolyte contains at least one of thiols, thiophenes, thioanisoles, thiazoles, thioacetates, aromatic sulfones, and the derivatives thereof. The capacity of the battery is not significantly degraded after cycling and its cycle life is significantly long.